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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,336	05/15/2001	Philip R. Patterson	P0366	1102
23735	7590	01/11/2005	EXAMINER	
DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			WANG, JIN CHENG	
			ART UNIT	PAPER NUMBER

2672

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,336

Applicant(s)

PATTERSON ET AL.

Examiner

Jin-Cheng Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14, 25-27 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14, 25-27 and 30-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 10/12/2004 has been entered. Claims 1-8, 15-24 and 28-29 have been cancelled. Claims 9, and 25-27 have been amended. Claims 30-35 have been newly added. Claims 9-14, 25-27 and 30-35 are pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 9-14 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhao et al. U.S. Pat. No. 6,141,753 (hereinafter Zhao).

4. Re Claims 9 and 35:

Zhao teaches a method for managing images, the images including a first image comprising a first identifier steganographically embedded therein, said method comprising:

Retrieving a copy of the first image from an image database (*e.g., Zhao teaches retrieving the digital representation with the first fingerprint watermark stored in work storage 105 wherein the digital representation has hierarchies of watermarks, making it possible to use*

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the watermark with digital representations such as the JPEG encoding of images and the MPEG encoding of motion pictures which are subject to compression and other processing during transmission; the Examiner interprets the work storage storing the digital representations such as the JPEG encoded images as an image database; see column 7-8 and 11);

Altering the copy of the first image to provide a second image (e.g., removing all but the two most recent fingerprint watermarks when it stores the revised digital representation in work storage 105 and thereby altering the copy of the first image; column 7-8);

Steganographically embedding a second identifier in the second image (e.g., steganographically embedding a plurality of the encryption keys including the new and old public watermarks, and/or secret owner identifier watermarks, and/or two symmetrical keys, in the modified digital representation before distribution to a new user; column 5-6; 7-8 and 11);

Providing the steganographically embedded second image to the image database for storage, wherein the image database associates the second identifier with the first identifier so as to associate the first image and the second image (e.g., the second image with a new key is stored in the work storage 105 and is associated with the first fingerprint watermark because the second image has the first fingerprint watermark embedded within it. It is clear there is an association between the second image and the first image because the second image is changed from the first image and they share a common fingerprint watermark; column 7-8 and 11).

Claim 10:

The claim 10 encompasses the same scope of invention as that of claim 9 except additional claimed limitation of removing the first identifier from the second image. However,

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Zhao further discloses the claimed limitation of removing the first identifier from the second image (*e.g., Zhao teaches removing all but the two most recent fingerprint watermarks when it stores the revised digital representation in work storage 105; column 7-8*).

Claim 11:

The claim 11 encompasses the same scope of invention as that of claim 9 except additional claimed limitation of altering the first identifier in the second image. However, Zhao further discloses the claimed limitation of altering the first identifier in the second image (*e.g., Zhao teaches removing all but the two most recent fingerprint watermarks when it stores the revised digital representation in work storage 105 and thereby at least one of the two fingerprint watermarks associated with the second image is altered; column 7-8*).

Claim 12:

The claim 12 encompasses the same scope of invention as that of claim 9 except additional claimed limitation of storing information related to the first image in the database. However, Zhao further discloses the claimed limitation of storing information related to the first image in the database (*e.g., the copy server maintains a database of transactions, user identifiers, and keys. The copy server will use the user identifier and a transaction identifier to locate the re-encryption key that was downloaded to copy client with the digital representation; column 7-8*).

Claim 13:

The claim 13 encompasses the same scope of invention as that of claim 12 except additional claimed limitation of the related information comprising at least one of metadata, location, date, permission level, security access levels, analyst comments, notes, files, and past usage information. However, Zhao further discloses the claimed limitation of the related information comprising at least one of metadata, location, date, permission level, security access levels, analyst comments, notes, files, and past usage information (such as use limitation or use information, permission for various uses; column 5-6, 7-8 and 10).

Claim 14:

The claim 14 encompasses the same scope of invention as that of claim 13 except additional claimed limitation of the database comprising a plurality of databases.

However, Zhao further discloses the claimed limitation of the database comprising a plurality of databases (*e.g., the database storing the identifiers and keys and the database storing the digital representation in the work storage 105; column 7-8*).

5. Claims 25-27 and 30-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Stefik et al. U.S. Pat. No. 6,233,684 (hereinafter Stefik).

6. Re Claims 25 and 33-34:

Stefik teaches a system comprising:

A first user terminal (*e.g., the user's computer or the authoring repository transacting with the on-line repository such as a remote internet server; Fig. 1-2, 14 and 16; col. 16*);

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A second user terminal (e.g., *the rendering repository such as the network printer server having access to the internet and transacting with the online repository such as a remote internet server; column 9, 12-17; Figs. 1-2, 14 and 16*);

A database (e.g., *the publisher's repository or the online repository having a list of digital works or repository 101 containing a list of digital works*), wherein the first user terminal and the second user terminal are in communication, and the first user terminal and the second user terminal are each in communication with the database (e.g., *the publisher's repository, the online repository and/or the repository 101 having a list of digital works; figures 12, 5 and 14-17; col. 16*); and

A gatekeeper (e.g., *the trust box, the repository 101, and/or the online distributor's repository in combination with the Credit Server and Billing Clearinghouse constitute a gatekeeper wherein the gatekeeper acts as an intermediary between the user's computer and the server printer; Figures 1 and 5 and 14-17*) to regulate the flow of at least a first image between the first user terminal (e.g., *the digital work in an encrypted form at the user's computer or authoring repository 102*) and the second user terminal (e.g., *the rendering repository 103 such as the printer server*), wherein the first image comprises at least a first digital watermark (e.g., *the encrypted digital work with watermarks*) including a first identifier, said gatekeeper to determine a security level associated with the first image (*by decrypting the digital work such as the first image; The set of usage rights associated with the same digital work having the watermark embedded in an encrypted form wherein the digital work having different levels of encryption and "scrambling", i.e., a digital work with lower security level of encryption can be accessed by a large number of consumers versus a digital work with higher security level of*

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encryption can be accessed by only a small number of consumers. Therefore, the consumer must have an authorizing digital license to access or copy or transfer certain digital works with the appropriate security levels of encryption to avoid unauthorized copying/printing and the consumer possesses a digital certificate which contains the watermark information; security and watermark capabilities of the user's terminal are checked; by comparing the watermark information in the consumer's digital certificate with the watermark information in certain digital works identifying the usage rights, unauthorized usage of the digital work can be prevented; the digital work is then decrypted so that the printer server is allowed to print the image for the given security level; column 9, 12-15 and 17), compare the first image security level with a user security level, and to allow access by the second user terminal to the first image based on a result of the comparison (by comparing the watermark information in the consumer's digital certificate with the watermark information in the digital work identifying the usage rights wherein the trust box sets the security level; the digital work is then decrypted and the watermark font is downloaded to the server printer through the trust box so that the printer server is allowed to print the image for the given security level; Moreover, the printer server also keeps the transaction records; see column 9, 12-17) wherein said gatekeeper comprises or communicates with a digital watermark decoder to decode the digital watermark to determine the first identifier (column 9, 12-16), and to interrogate the database with the first identifier to retrieve the security level (e.g., interrogating the publisher's or the online distributor's repository which encrypts the document using DES or some other encryption code and the encryption uses a key length that is compatible with requirements of security and legal constraints; and the distributor repository sends the encrypted document and the envelope

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containing the key along to the consumers workstation wherein the embedded data is extracted from the watermark and decoded. The data extracted is then used to identify who and where the unauthorized reproduction of the digital work came from. Moreover the consumer workstation has a program that decrypts the digital page and sends it to the printer with the watermarks through an intermediary such as the trust box wherein the printer server is allowed to print the image for the given security level and keeps a record of transaction with the consumer; column 9, 12-16).

Claim 26:

The claim 26 encompasses the same scope of invention as that of claim 25 except additional claimed limitation that the first image digital watermark includes security level data, and wherein the gatekeeper comprises software code to decode the digital watermark to determine the security level data.

However, Stefik further discloses the claimed limitation that the first image digital watermark includes security level data (*e.g., different levels of encryption and "scrambling"; column 17*), and wherein the gatekeeper comprises software code to decode the digital watermark to determine the security level data (*e.g., the embedded data is extracted from the watermark and decoded by the means for extraction of the watermark data; Figure 13 and column 9, 12-15 and 17*).

Claim 27:

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The claim 27 encompasses the same scope of invention as that of claim 25 except additional claimed limitation that the user security level comprises at least one of a security level for a user and a security level for a user terminal.

However, Stefik further discloses the claimed limitation that the user security level comprises at least one of a security level for a user and a security level for a user terminal (*e.g., watermark information in certificates from the user, the computer itself, and the printer; column 15*).

Claim 30:

The claim 30 encompasses the same scope of invention as that of claim 26 except additional claimed limitation that the user security level comprises at least one of a security level for a user and a security level for a user terminal.

However, Stefik further discloses the claimed limitation that the user security level comprises at least one of a security level for a user and a security level for a user terminal (*e.g., watermark information in certificates from the user, the computer itself, and the printer; column 15*).

Claim 31:

The claim 31 encompasses the same scope of invention as that of claim 25 except additional claimed limitation of said gatekeeper recording a transmission in the database of the first image from the first user terminal to the second user terminal.

However, Stefik further discloses the claimed limitation of said gatekeeper recording a transmission in the database of the first image from the first user terminal to the second user terminal (*e.g., column 9, 12-15 wherein the second user terminal is the consumer's terminal or*

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the printer terminal and the first user terminal is the publisher or distributor's user terminal wherein the billing records are kept in the Financial Clearinghouse and Credit Servers).

Claim 32:

The claim 32 encompasses the same scope of invention as that of claim 26 except additional claimed limitation of said gatekeeper recording a transmission in the database of the first image from the first user terminal to the second user terminal.

However, Stefik further discloses the claimed limitation of said gatekeeper recording a transmission in the database of the first image from the first user terminal to the second user terminal (*e.g., column 9, 12-15 wherein the second user terminal is the consumer's terminal or the printer terminal and the first user terminal is the publisher or distributor's user terminal wherein the billing records are kept in the Financial Clearinghouse and Credit Servers).*

Remarks

7. Applicant's arguments, filed 08/10/2004, have been fully considered but they are not deemed to be persuasive.

8. Applicant argues in essence with respect to claims 9 and 35 and similar claims that:

"In contrast, the relied upon Zhao passage suggests that a second image is associated with a first watermark because the second image has the first watermarked embedded within it (see the subject office action at page 3, third paragraph), and not of associating first and second images.."

This is not found persuasive for the reasons given below. Zhao discloses steganographically embedding the encryption keys including the new and old public watermarks, and/or secret owner identifier watermarks, and/or two symmetrical keys, in the modified digital representation before distribution to a new user (column 5-6; 7-8 and 11). Zhao further discloses the second image with a new key is stored in the work storage 105 and is associated with the first fingerprint watermark wherein the association is established because the second image has the first fingerprint watermark embedded within it. It is clear there is an association between the second image and the first image because the second image is changed from the first image and they share a common fingerprint watermark (column 7-8 and 11).

9. Applicant argues in essence with respect to claims 25-26 and similar claims that:
“Claim 25 stands rejected as being anticipated by U.S. Patent No. 6,233,684 (hereafter referred to as ‘Stefik’). We expressly traverse this rejection. We also note that Stefik does not teach a combination as presently recited in claim 25. For example, currently amended claim 25 recites a gatekeeper including or communicating with a digital watermark decoder. The decoder decodes a digital watermark to determine the first identifier, and then interrogates a database with the first identifier to retrieve a security level. In contrast, the relied upon language from Stefik suggests that a decoded watermark is used merely to identify who and where an unauthorized reproduction came from (see the subject office action on pages 11 and 12 under ‘Claim 25’, but not to retrieve a security level in combination with other features of claim 25.”

This is not found persuasive for the reasons given below. Stefik teaches a gatekeeper such as the trust box, the repository 101, and/or the online distributor's repository in combination with the Credit Server and Billing Clearinghouse constitute a gatekeeper wherein the gatekeeper acts as an intermediary between the user's computer and the server printer (Figures 1 and 5 and 14-17) to regulate the flow of the digital work in an encrypted form at the user's computer or authoring repository 102 and the rendering repository 103 such as the printer server, wherein the first image comprises the encrypted digital work with watermarks including a first identifier and the gatekeeper determines a security level associated with the first image by decrypting the digital work such as the first image in which the set of usage rights associated with the same digital work having the watermark embedded in an encrypted form. The digital work has different levels of encryption and "scrambling", i.e., a digital work with lower security level of encryption can be accessed by a large number of consumers versus a digital work with higher security level of encryption can be accessed by only a small number of consumers. Therefore, the consumer must have an authorizing digital license to access or copy or transfer certain digital works **with the appropriate security levels of encryption** to avoid unauthorized copying/printing and the consumer possesses a digital certificate which contains the watermark information; security and watermark capabilities of the user's terminal are checked. By comparing the watermark information in the consumer's digital certificate with the watermark information in certain digital works identifying the usage rights, unauthorized usage of the digital work can be prevented. The digital work is then decrypted so that the printer server is allowed to print the image for the given security level (column 9, 12-15 and 17). Stefik discloses comparing

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the watermark information in the consumer's digital certificate with the watermark information in the digital work identifying the usage rights wherein the trust box sets the security level; the digital work is then decrypted and the watermark font is downloaded to the server printer through the trust box so that the printer server is allowed to print the image for the given security level. Moreover, the printer server also keeps the transaction records (column 9, 12-17). Stefik further discloses interrogating the publisher's or the online distributor's repository which encrypts the document using DES or some other encryption code and the encryption uses a key length that is compatible with requirements of security and legal constraints; and the distributor repository sends the encrypted document and the envelope containing the key along to the consumers workstation wherein the embedded data is extracted from the watermark and decoded. The data extracted is then used to identify who and where the unauthorized reproduction of the digital work came from (i.e., a second terminal). Moreover the consumer workstation has a program that decrypts the digital page and sends it to the printer with the watermarks through an intermediary such as the trust box wherein the printer server is allowed to print the image for the given security level and keeps a record of transaction with the consumer (column 9, 12-16).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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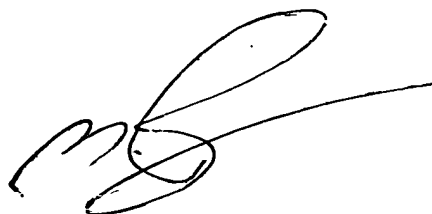
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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